

#55920 Store at -20°C

mGluR5 (D6E7B) Rabbit mAb**Cell Signaling**
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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-F	H M R	Endogenous	150, 300	Rabbit IgG	#P41594	2915

Product Usage Information**Application**

Western Blotting
Immunoprecipitation
Immunofluorescence (Frozen)

Dilution

1:1000
1:50
1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

mGluR5 (D6E7B) Rabbit mAb recognizes endogenous levels of total mGluR5 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the carboxy terminus of human mGluR5 protein.

Background

mGluR5, a metabotropic glutamate receptor, is a class C G protein-coupled receptor that signals through the Gq/11-PLC-inositol 1,4,5 triphosphate pathway (1). mGluR5 is comprised of a large N-terminal extracellular domain, seven transmembrane domains, and a C-terminal intracellular domain. Glutamate binding to mGluR5 leads to an increase in intracellular calcium levels and stimulation of PKC activity (2). In neurons, mGluR5 is found in the post-synapse, in a complex with NMDA receptors, PSD-95, SHANK, and Homer (3). mGluR5 is also expressed in microglia and astrocytes (4). Neuronal mGluR5 has been shown to interact with amyloid beta oligomers, and mGluR5 antagonists exhibit neuroprotective effects (5) placing mGluR5 as a potential therapeutic target for Alzheimer's disease. In glial cells, mGluR5 appears to play an anti-inflammatory role by negatively regulating the release of inflammatory factors (6).

Background References

1. Abdul-Ghani, M.A. et al. (1996) *J Neurophysiol* 76, 2691-700.
2. Pin, J.P. and Duvoisin, R. (1995) *Neuropharmacology* 34, 1-26.
3. Tu, J.C. et al. (1999) *Neuron* 23, 583-92.
4. Verkhratsky, A. et al. (1998) *Physiol Rev* 78, 99-141.
5. Bruno, V. et al. (2000) *Neuropharmacology* 39, 2223-30.
6. Byrnes, K.R. et al. (2009) *Glia* 57, 550-60.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **IF-F:** Immunofluorescence (Frozen)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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